PRENTICE COMPUTER CENTRE

UNIVERSITY OF QUEENSLAND, ST. LUCIA, QUEENSLAND, AUSTRALIA. 4067.

NEWSLETTER

N-270   25-January-82

CONTENTS

Authorized by the Director of the Computer Centre

Principle Service Centres

	Extensions
Operations Manager	3471
Contract Programming & Feasibility Studies	3944
System Status Automatic Answering	3101
General Enquiries	3018
Training & Courses	3021

CONSULTING

PROBLEM AREA	MAIL BOX	NAME AND EXTENSION	

Operations and Programming

PROBLEM AREA	MAIL BOX	NAME AND EXTENSION	
Accounts	ACCOUNTS	Ms C. Walker	2188
Cobol	COBOL	Ms B. King	3020
Commands and utilities	COMMANDS	Mr R. Morrison	2962
Database (VG, 1022)	DATABASE	Ms A. Shanahan	2951
Fortran	FORTRAN	Mr R. Armstrong	2953
		Mr J. Currie	2924
Graphics	GRAPHICS	Mr M. Williams	2835
Micros	MICROS	Mr B. Peterson	2836
Network	NETWORK	Mr B. Claire	2960
Operations	OPERATIONS	Senior operator	3212
PDP-11 software	PDP11	Ms N. Meier	3023
		Mr N. Richter	3022
Program Library, Tapes	LIBRARY	Ms L. Roberts	3943
Statistics	STATISTICS	Mr B. Maher	3021
		Mr C. McGovern	2958
Text processing, Typesetting	TEXT	Mr A. Broughton	2837
Non-specific problems	OPERATIONS	Senior operator	3212

Engineering and maintenance

Development and communications	ENGIN	Mr G. Rees	3288
Mini/Micro support	ENGIN	Mr C. Lythall	3942
		Mr A. Langdon	2928
Mini and terminal maintenance	MAINT	Ms M. Kenley	3938

Griffith University:

Consulting	7561
Computer Services	7560

INDEX TO PRENTICE COMPUTER CENTRE NEWSLETTER

Dates of Issues Published in 1981

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1.0 STAFF CHANGES

Staff wastage at the Prentice Computer Centre has been far higher than normal.

Di Ball, a member of our staff for fourteen years and our Operations Manager for the past four years, resigned to devote her time to her new and increasing family commitments. Until a new Operations Manager is appointed, her place will be taken by Sandra Campbell.

Our Specialist Systems Programmer, Will Gout, two Senior Systems Programmers, John Ellwood and Rob Perrot as well as an Assistant Systems Programmer, Mark Robbie also resigned in January. There are difficulties in the recruitment of competent computing staff and it may be some time before we are able to replace these staff members. We will do our best to cover all of our commitments by existing staff members but obviously with less resources to meet increasing work load, there will be some difficulties. We request your cooperation.

Director
extension 2189

2.0 REMOVAL OF FILES FROM THE OFFLINE AREA

All files not accessed on the offline area since 1 January 1981 will be removed to tape in February.

The monitor command TDIRECT will give details of files removed to tape. If you require any of these files please complete a File Retrieval form (for files skimmed to tape) available at the Centre. The return of these files will take no longer than one week.

Sandra Campbell
extension 3471

3.0 NEW VERSION OF SPSS FOR VAX

Release 8.1 of SPSS is now implemented on the VAX, and intending users should note the following major operational changes. These apply only to the VAX.

3.1 SPSS command

The SPSS command should now normally be given in the "complete single-line" form, i.e.

$ SPSS/OUTPUT = X.Y A.B x y   where

A.B is the name of the SPSS - "control" file
X.Y is the file-specification of the file to which output is to be directed
x is the "workspace" required (defaults to 80, i.e. 80,000 characters)
y is the "labelspace" required (defaults to 30, i.e. 30,000 characters)

Note: For interactive operations:

(a) if the OUTPUT qualifier is omitted, output is written to terminal (whereas previously it was written to FOR006.DAT)

(b) if the control filename is omitted, SPSS now assumes input from terminal, i.e. this version does not move into the "continued-prompt" mode. Current users of SPSS on the VAX will obviously have to adjust to this change.

i.e. SPSS now assumes SYS$INPUT for input and SYS$OUTPUT for output, which for an interactive user are both equated to the terminal.

For batch users:

SYS$INPUT equates to the current input stream
and SYS$OUTPUT to the log file,

unless the command shown above is issued in the command file submitted to batch.

3.2 INPUT MEDIUM Command

While users may still use the keyword DISK as the specification-field content for the INPUT MEDIUM command-line, with the SPSS command preceded by the ASSIGN command

$ASSIGN P.Q FOR008   (where P.Q is the raw-data file),

SPSS now also accepts the usual file-specification, i.e.

INPUT MEDIUM P.Q

3.3 Memory-workfile

An optional parameter z may be appended to the SPSS command, i.e.,

$SPSS/OUTPUT = X.Y A.B x y z

This parameter specifies the amount of memory to be allocated for storage of observations. The default value for z is 30 (i.e. 30,000 characters). Where this is insufficient, observations are acquired via disk-reads. The required value is given by 4 * no. of observations * no. of variables.

3.4 Enhancements

ANOVA. ANOVA will now compute sums of square and mean squares for one case per cell designs in the absence of Option 3. No tests of significance can be made since the error term is 0.

CROSSTABS. A warning message is printed for tables with expected cell counts of less than 5 when statistic 1 is requested.

FACTOR. NFACTORS and MINEIGEN can now be used to control the number of factors extracted with IMAGE factoring.

FREQUENCIES, general mode has been fine-tuned to run up to 15% faster.

GET and SAVE SCSS. These facilities have been entirely rewritten. GET SCSS will now read files created by CMS versions of SCSS modified for the extended file facilities under release 6 of CMS. SAVE SCSS will now compress data for variables with negative integer values (provided the range is 65355 or less).

MULT RESPONSE. Mult Response will now produce tables of groups with groups which pair variables between the groups, rather than pool all variables.

Data Definition and Transformation Control commands. The limit of 250 symbols on transformation control commands, SELECT IF, *SELECT IF, MISSING VALUES, ASSIGN MISSING, and PRINT FORMATS no longer applies. These control commands are now stored in WORKSPACE as they are being parsed. Note, do not allocate all SPACE to TRANSPACE since no WORKSPACE will be available to store control commands. A small amount of WORKSPACE may not be large enough to store the control command.

Fisher's Exact Test. SPSS now prints a two-tailed test of significance for Fisher's Exact Test.

Keyword THRU. The keyword TO may now be used in place of the keyword

THRU wherever THRU is called for. Note, this does not mean that TO is interchangeable with THRU everywhere TO is called for.

3.5 Documentation

Further details may be obtained from the file [SPSSTEST]USERGUIDE.DOC, i.e. to obtain a copy, issue the command

        $PRINT [SPSSTEST]USERGUIDE.DOC
    or $LPRINT [SPSSTEST]USERGUIDE.DOC

Note: Facilities relating to archival do not apply.

If any problems, contact the Program Librarian.

                                   Leonie Roberts
                                   extension 3943

4.0 LIBRARY NEWS - SPSS VERSION 9 FOR KL10

A new release of SPSS has been placed on NEW: on the KL10. This version includes three new statistical procedures:

    - MANOVA
    - BOX-JENKINS
    - NEW REGRESSION

It also corrects the problem of insufficient space for a FREQUENCIES procedure which was detailed in a previous newsletter (N-269).

MANOVA is a "generalised multivariate analysis of variance and covariance program which will perform univariate and multivariate linear estimation and tests of hypotheses for any crossed and/or nested design with or without covariates."

BOX-JENKINS is "designed to aid in the analysis of univariate time-series data. The procedure has three phases: identification, estimation and forecasting."

NEW REGRESSION is a more powerful procedure to replace REGRESSION. It features new variable selection techniques: forced removal, backward elimination and stepwise selection. It provides regression through the origin as an option, refined entry and removal of independent variables, and more flexible output.

This version will replace the version on STA: on the KL10 at the end of February.

The Centre also has a utility program SPSIBM which enables a user to access SPSS data which was saved on tape on an IBM System 360 or 370. The program reads the file from tape and produces an SPSS file in standard DEC-10 format. If the IBM tape contains labels, the user must position the tape at the beginning of the data. Generally, a labelled tape has labels before and after the data file thus the data files will be the second, fifth and eighth files on the tape. To move the tape to the data file the following command can be used (where x is one less than the file required).

.SKIP MTA:x F

For further information contact

Leonie Roberts
extension 3943

5.0 A NEW VERSION OF 1022

A new version (114E) of 1022, a data base management system, has been placed on NEW: on the KL10. This will replace version (114D-107) on SYS: at the end of February.

Version 114E improves the system in the following areas:

1. It adds structured programming statements to PL1022, the data programming language.

2. It improves access for simultaneous update tasks.

The new features and statements for PL1022 are:

1. Full Boolean expressions

2. A new IF statement that does not require labels and allows IF THEN ELSE constructions.

3. A REPEAT statement.

4. A WHILE statement.

5. A LEAVE statement.

Further details can be obtained by printing the file, NEW:CH114E.MEM.

<div align="right">
Leonie Roberts
extension 3943
</div>

6.0 CURRENT LOOP LINES/TERMINALS

As a result of the Campus Communications Network and relocation of Telecom Data installations all current-loop lines will be phased out by the end of 1982. These services are numbered DTL1(x) where x = A,B,C...etc.

It is possible to convert some types of terminals to run on the new system (RS232 interface), however because of the cost involved, it is recommended that they be replaced. For enquiries ring G. Rees or D. Anderson.

<div align="right">
Graham Rees
extension 3288
</div>

7.0 RUNOFF NEWS

7.1 A new switch value for "current" RUNOFF on the KL10

You like top-numbering for pages, but resist the word "Page" appearing before the folio? Until now, the only remedy was to edit the .MEM file to remove the offending word.

Now, RUNOFF has the capability to prevent the generation of the word. The method is simple:

the /HEAD: switch now admits the value BLANK (like UPPER, LOWER, MIXED), so that to suppress the word "Page", issue the commands

```
.R RUNOFF            or in TXTMEN,
*Filename/HEAD:BLANK     Menu) RUNOFF Filename/HEAD:BLANK
```

Alternatively, you may now also insert the RUNOFF command

.HEAD BLANK

in your .RNO file.

7.2 An alternative version of RUNOFF on KL10, and RUNOFF on VAX

A modified version of RUNOFF now exists on PUB:,

i.e. .R PUB:RUNOFF.

This version is identical to the version of RUNOFF now implemented on the VAX - See Section 3 below for an overview of the new and deleted features.

The sad news is that, since this version is written in a high-level language, processing costs on the KL are generally increased considerably when this version is used; while the exact difference depends on the file being processed, a factor of 2-4 should generally be anticipated.

However, on the VAX, the costs are comparable to those for the current KL version. This may encourage the reader who has need of some of the additional features to peruse Section 3 below, and perhaps even attend the proposed demonstration announced in Section 4.

7.3 Brief outline of major differences

A more complete discussion will be incorporated in the demonstration on March 23 (see Section 4). But for the more intrepid and/or impatient user, here is a quick reference of the principal changes and additions. More complete documentation is available in the files PUB:RUNINP.HLP and PUB:RUNOFF.HLP.

(i) The AP command does not accept parameters; however it does pick up values set by a preceding P command or a preceding SET PARAGRAPH command (which is a new command).

To run old files containing AP commands with trailing parameters, the following procedure is recommended:

Edit the .RNO file, replacing every .AP x,y,z command with the sequence

.SET PARAGRAPH x,y,z
.AP

7

(ii)   The list of switches/qualifiers is amended considerably.   Three
       important additions are:

       /BOLD:n (used in conjunction with .FLAG BOLD command) to enable
       bold text to be produced.

       /CONTENTS:filespec to enable the generation of a table of
       contents.

       /INDEX:filespec to enable the creation of a master index from
       separate segments of a total document.

            Many of the "old" switches are no longer available,
       although most are still available as commands in the .RNO file.

       NB: /TYPESET switch is not recognized.

(iii) The list of flag characters has been expanded to include:

       + (use end-of-sentence spacing)
       % (superimpose following characer on previous character)
       * (embolden next character)
       ^* (lock on bold)
       ]* (turn off bold) Note: *, _*,]* should be used in conjunction
           with/BOLD switch
       $ (insert text - used with SET DATE and SET TIME commands)
       = (discretionary hyphen)
          (break word without space)

       Each of the above applies only when the corresponding SET FLAG
       command is in effect.

(iv)   Some of the additional commands/features are:

       . various "standard" page layouts invoked by .LO n,m command.
       . numbering of lists, pages, headings may be numeric   or
         alphabetic, and the "number" may be enclosed within other
         characters (such as brackets); "bullets" may also be used for
         lists.
       . a two-column index may be constructed.
       . a now command, .REQUIRE filespec, allows pieces of a document
         to be pulled together for composition.
       . the (optional) generation of contents page(s), based on
         header-levels.
       . the line count for a FOOTNOTE command is now optional.

7.4 Demonstration of VAX and PUB: versions of RUNOFF

A 2-hour demonstration of this alternative version of RUNOFF will be held in the Client Room on Tuesday March 23, 2.30-4.30 pm. If intending to come, please contact extension 3018.

Barry Maher
extension 3021

8.0 INFORMATION CONCERNING COURSES

8.1 Introduction

The Centre conducts regular courses for users wishing to make use of its facilities, and a schedule of courses for the period February-July 1982 is listed below.

For the benefit of new and potential users, the following summary of courses and conditions is provided.

(a) General Notes

(i)   Instruction is currently provided in the following areas:

- elementary use of terminals, operating system commands, editing, and interactive and batch operation.

- use of popular packages in such areas as statistics, text-processing, data-base management and graphics.

- elementary programming in the FORTRAN and BASIC languages.

(ii) Enrolment is free for staff of University of Queensland and Griffith University and post-graduate students only; all other users must pay the fee prescribed in the following schedule:

```
Introduction to PDP-10              : $40
VAX Conversion Course, Statpack : $20
1022                                : $50
VG, RUNOFF, SPSS, BASIC             : $60
FORTRAN                             : $100
```

(iii) With the exception of courses designated (GU) in Section 2, all courses are held in the Client Room, Hawken Building, St Lucia. The courses marked (GU) are held in the Seminar

9

Room, Terminal Laboratory, AES Building, Griffith University.

(iv) To allow for sufficient practice, enrolments at all courses are limited. Also, where insufficient enrolments are received for courses, the Centre reserves the right to cancel such courses.

(v) In addition to the courses listed in Section 2, occasional seminars may be conducted from time to time on special topics. Demonstrations for groups with special interests may be arranged on request.

(b) Outline of courses and packages

Note: The course "Introduction to PDP-10" is concerned with the development of background material and basic skills and techniques, which are then assumed to be familiar to people enrolled in all other courses. Users without this knowledge and some facility with terminal usage, file-manipulation and editing MUST enrol for this course before enrolling in any other course.

[Because of the wider variety of packages currently available on the KL10, it is assumed that new users may prefer to be introduced to the KL10 system rather than the VAX system. However, if sufficient new users wish to proceed directly to the VAX, it would be possible to arrange a special course to meet this need. Please contact the Centre if your requirements would be better served by this approach.]

(i) Introduction to PDP-10 (12 hours)

Introduction to computer systems in general; basic operating procedures for the PDP-10 system; elementary monitor commands; editing; interactive and batch processing.

(ii) VAX Conversion Course (6 hours)

An introduction to the use of the VAX 11/780 system for experienced users of the PDP-10 system - VAX facilities; operating system commands; programming language differences; SPSS and RUNOFF.

(iii) SPSS (18 hours)

A widely-used general-purpose statistical package. This course is designed to introduce new users to the fundamental techniques necessary to perform any of the wide range of statistical procedures available within SPSS.

(iv) <u>Statpack (4 hours)</u>

Statpack is an interactive statistical package containing a fair range of common analysis routines, suitable for processing data files of modest size.

(v) <u>RUNOFF (18 hours)</u>

RUNOFF is a text-processing package, i.e. it accepts text material with embedded formatting commands to produce output styled to the user's specifications. Automatic justification (margin-alignment) and pagination are standard features. RUNOFF is widely used in departmental offices for the production of documents, and by academic staff and students for the production of lecture notes, papers for publication, theses, etc.

(vi) <u>VG (18 hours)</u>

The VG package is used for the storage, interrogation and selective retrieval of information organised as records composed of fields. It is especially applicable to information of a textual nature - catalogues, mailing lists, bibliographic material - because of its variable-length-record nature. Reports may be adapted to user's specifications by using its link to the RUNOFF program.

(vii) <u>1022 (15 hours)</u>

Another data-base management system, more suited (but not restricted) to records whose field-values are numeric. It has an inbuilt programming capability, as well as interfacing to other host languages, and to SPSS. A comprehensive report-generator is contained within the package.

(viii) <u>Elementary FORTRAN Programming (30 hours)</u>

An introduction to the programming language FORTRAN. The course is built around, but extends beyond, the audio-visual course "A London Fortran Course". Those attending this course are required to purchase a copy of the lecture notes accompanying the audio-visual presentation - available from the Centre at $4.10.

(ix) <u>Elementary BASIC Programming (18 hours)</u>

Similar in content to the FORTRAN course, but in the BASIC language. This course is suitable also for people working with departmental micro-computers.

(x)   Graphics

Use of the plotting and other graphics facilities. Those attending this course will be expected to have a basic working knowledge of FORTRAN (since the plotting routines are written in this language).

8.2 Schedule of Courses

Notes:

(i) This list of proposed courses may be inspected by giving the command

.TYPE (or PRINT) HLP:COURSE.HLP

(ii) Users wishing to check on the availability of the Client Room (which is not open during courses, demonstrations and seminars, except for the collection of output) may give the command

.TYPE (or PRINT) HLP:CLROOM.HLP

February

Introduction to PDP-10   : Feb 2-3
                                    2 full days 9-12am+2-5pm each day

Introduction to PDP-10   : Feb 4-5
                                    2 full days 9-12am+2-5pm each day

RUNOFF   : Feb 8-12
                                    5 half days 9-12am each day

RUNOFF (GU)   : Feb 8-12
                                    5 half days 2-5pm each day

1022   : Feb 22-26
                                    5 half days 9-12am each day

1022 (GU)   : Feb 22-26
                                    5 half days 2-5pm each day

Note: Since initially advertised, dates for the above two 1022 courses have been modified.

March

Demonstration of alternative version of RUNOFF	: March 23 2.30-4.30pm
Introduction to PDP-10	: March 24-25 2 full days 9-12am+2-5pm each day
SPSS	: March 29 - April 2 5 half days 9-12.30pm each day

April

BASIC Programming	: April 6-8 3 full days 9-12am+2-5pm each day
Statpack	: April 14-15 2 half days 2-4pm each day
RUNOFF	: April 19-23 5 half days 9-12am each day
SPSS	: April 19-23 5 half days 1.30-5pm each day

May

FORTRAN Programming	: May 10-14 5 full days 9-12am+2-5pm each day
VG	: May 24-28 5 half days 9-12am each day
1022	: May 24-28 5 half days 2-5pm each day

June

Introduction to PDP-10	: June 7-8 2 full days 9-12am+2-5pm each day
Statpack	: June 9 1 full day 10-12am + 2-4pm
Introduction to PDP-10	: June 10-11 2 full days 9-12am+2-5pm each day
BASIC Programming	: June 16-18 3 full days 9-12am+2-5pm each day
RUNOFF	: June 21-23 3 full days 9-12am+2-5pm each day

SPSS   : June 29-July 1
                                      3 full days 9-12am+2-5pm each day

July

VAX Conversion Course   : July 2
                                      1 full day 9-12am + 2-5pm

FORTRAN Programming   : July 5-9
                                      5 full days 9-12am+2-5pm each day

Plotting/Graphics   : during week July 12-16
                                      Details to be finalised.

8.3 Enrolments and Enquiries

     Please note that enrolments for all courses should now be
directed to extension 3018. [To those who have been trying extension
3021 without much success, more service is guaranteed on extension
3018].

                                        Barry Maher
                                        extension 3021

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